

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. ____

WASTE DISCHARGE REQUIREMENTS
FOR
SOC RESOURCES, INC.
VEDDER-USL LEASE
MOUNT POSO OIL FIELD
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. SOC Resources, Inc. (hereafter Discharger), is a California corporation that owns and operates crude oil production wells at the lease designated as "Vedder-USL" in the Mount Poso Oil Field. SOC Resources, Inc. is owned and operated by Mr. John Castellucci. The Vedder-USL Lease is a United States Federal Government minerals fee property regulated by the U.S. Department of Interior, Bureau of Land Management.
2. The Discharger operates one unlined surface impoundment, generally known in the industry as a sump, at the Vedder-USL Lease. Approximately 3,500 barrels/day (147,000 gallons/day) of produced wastewater is discharged to the sump. Solar evaporation and percolation take place in the sump, but much of the wastewater from the sump is piped to the Jones Reservoir on the Jones Lease.
3. The wastewater disposal operation is currently not regulated by Waste Discharge Requirements (WDRs). WDRs are being issued to assure compliance with current State regulations and Regional Board policies and guidelines.
4. This Order implements the *Water Quality Control Plan for the Tulare Lake Basin, Second Edition* (hereafter Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

LOCATION AND DESCRIPTION

5. The Discharger's facility is approximately eighteen miles north of the City of Bakersfield, in the NE ¼ of the NW ¼ of Section 28, T26S, R28E, MDB&M (Assessor Parcel No. 061-071-098), as shown on Attachments A and B that are attached to and made part of this Order. The discharge occurs in the Mount Poso Oil Field, which is on the east side of the Tulare Lake Basin.
6. The facility is located on a gently dipping homoclinal sequence of Miocene marine through Pleistocene fluvial sediments derived from the weathering of the Sierra Nevada Mountain Range. The Kern River (Pleistocene) Formation outcrops at the surface, and is underlain by the Etchegoin (Pliocene) and Vedder (Miocene) Formations. The Vedder Formation is the source of produced wastewater.
7. The outcropping Kern River Formation is a series of braided stream units deposited by the ancestral Kern River. It is approximately 900 feet thick and consists largely of poorly to

moderately sorted, medium to coarse-grained, arkosic sandstones and conglomerates. Interbedded with the coarsely clastic beds are less prominent, locally continuous, lenticular silts, clays, and mudstones.

8. There are two known active faults that occur near the facility. They are the Kern Front Fault and an unnamed fault, which are approximately eleven miles south and six miles south of the facility, respectively.
9. Land within the immediate area is used for oil production, cattle grazing, and agriculture.
10. The discharge occurs in the Kern Uplands Hydrologic Area (No. 558.90) of the South Valley Floor Hydrologic Unit, as depicted on interagency hydrologic maps prepared by the Department of Water Resources.
11. The climate is dry, with hot summers and mild winters. Available weather data indicates the average annual precipitation is 7.5 inches. Available evaporation pan data indicates that the average annual Class A pan evaporation is 64.7 inches.
12. The 100-year and 1000-year, 24-hour precipitation events calculated by DWR are 1.98 and 2.57 inches, respectively.
13. In the vicinity of the facility, Little Creek and Poso Creek are small, ephemeral drainage courses. These drainage courses are considered waters of the United States. Some surface flow can be observed in the drainage courses following storm events.
14. FEMA (Federal Emergency Management Agency) flood zone data for Kern County, dated 30 September 2003, indicates that the facility is not within a 100-year floodplain.

WASTEWATER CHARACTERISTICS

15. Connate formation water (wastewater) is co-produced in association with oil in the Mount Poso Oil Field. Wastewater at the Discharger's facility has a low inorganic salt content. Analytical results, sampled by Regional Board staff on 14 March 2005, show that the wastewater has the following characteristics:

| <u>Constituent</u> | <u>Units</u> | <u>Concentration</u> |
|------------------------------|--------------|----------------------|
| Specific Conductance (EC) | µmhos/cm | 880 |
| Total Dissolved Solids (TDS) | mg/L | 560 |
| Chloride | mg/L | 150 |
| Boron | mg/L | 0.84 |

16. Implementation policies in the Basin Plan regarding the disposal of oil field wastewater indicate that the maximum salinity limits for wastewater in unlined sumps overlying groundwater with existing and future probable beneficial uses are:

| <u>Constituent</u> | <u>Units</u> | <u>Concentration</u> |
|---------------------------|--------------|----------------------|
| Specific Conductance (EC) | µmhos/cm | 1000 |
| Chloride | mg/L | 200 |
| Boron | mg/L | 1 |

17. Based on Finding Nos. 15 and 16, the discharge of oil field wastewater to the sump is consistent with Basin Plan policy.
18. Generally, designated waste is non-hazardous waste that contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan. The discharge of designated waste to land is subject to the requirements of Title 27, California Code of Regulations (CCR), Section 20090(b) (hereafter Title 27).
19. The Discharger is exempt from the requirements of Title 27. The exemption is based upon the following:
 - a) The Regional Board is issuing waste discharge requirements;
 - b) The wastewater discharge, as permitted in the Order, is in compliance with the applicable water quality control plan; and,
 - c) The wastewater does not need to be managed according to Chapter 11, Division 4.5 of Title 22 as a hazardous waste.

GROUNDWATER INFORMATION

20. Aquifers underlying the facility are confined and not in hydraulic communication with the ground surface.
21. The direction of groundwater flow is generally to the west.
22. The uppermost aquifer is approximately 600 feet below ground surface.
23. The regional aquifer is the Basal Etchegoin Sand (Pliocene) found at 1800 feet below ground surface.
24. A 1986 analysis of groundwater from a private well, down gradient of the facility, shows that water quality is very good. Results are as follows:

| <u>Constituent</u> | <u>Units</u> | <u>Concentration</u> |
|---------------------------|--------------|----------------------|
| Specific Conductance (EC) | µmhos/cm | 290 |

| | | |
|----------|------|--------|
| Chloride | mg/L | < 12.7 |
| Boron | mg/L | < 0.1 |
| Nitrate | mg/L | < 0.4 |
| Arsenic | mg/L | < 0.1 |
| Iron | mg/L | < 0.05 |

25. The Basin Plan designates beneficial uses of the underlying groundwater as municipal, domestic, industrial, and agricultural supply.
26. Based on findings 20-25, the discharge of produced wastewater to the sump should not affect the water quality of the underlying aquifers.

OTHER LEGAL REFERENCES

27. The action to adopt waste discharge requirements for existing facilities is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance with Title 14, California Code of Regulations, Section 15301.
28. This Order requires the Discharger to submit technical reports as authorized under CWC Section 13267 (b)(1), which states in part:

“In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste outside of its region that could affect the quality of water within its region, shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the Regional Board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.”
29. The technical reports required by this Order and attached “Monitoring and Reporting Program No. _____” are necessary to assure compliance with these Waste Discharge Requirements. The Discharger operates the facility that discharges the waste subject to this Order.
30. The Discharger is not required to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) general industrial stormwater permit provided they have not experienced a reportable spill since 19 November 1987. It is the Discharger’s responsibility to comply with USEPA federal stormwater regulations (40 CFR Parts 122, 123, and 124) should it not qualify for exemption.

31. The Regional Board has notified the Discharger, interested agencies, and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
32. The Regional Board, in a public meeting, heard and considered all comments pertaining to this facility and discharge.
33. Any person affected by this action of the Regional Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the Internet at http://www.waterboards.ca.gov/water_laws/index.html and will be provided on request.

IT IS HEREBY ORDERED that pursuant to §13263 and §13267 of the Water Code, SOC Resources, Inc., its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and plans, policies, and regulations adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. The acceptance, treatment, or discharge of “hazardous waste” is prohibited. For the purposes of this Order, the term “hazardous waste” is as defined in Title 27, Section 20164.
2. Discharges to surface water or surface water drainage courses are prohibited except for stormwater discharges permitted by an active NPDES permit or for facilities exempt from the NPDES permitting requirements.
3. The discharge of wastes other than wastewater associated with the production of crude oil on the lease is prohibited.

B. Discharge Specifications

1. Wastewater shall only be discharged to the sump as described in Finding No. 2; wastewater from the sump may be discharged via pipeline to the Jones Reservoir on the Jones Lease.
2. Wastewater production shall be controlled to the extent necessary to maintain consistent compliance with the terms of this Order.
3. The sump shall be designed and maintained to prevent leakage, whether from erosion, slope failure, animal burrowing, or some other cause.

4. Precipitation and drainage control systems shall be designed, constructed, operated, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the sump.
5. The sump shall be free of oil or effectively netted to preclude entry of wildlife in accordance with Title 14, California Code of Regulations, Section 1770 (b), (3).
6. All wastewater storage and disposal facilities shall be operated and maintained to prevent liquids, precipitates, and sludges from concentrating to hazardous levels.
7. Neither the treatment nor the discharge shall cause a nuisance or condition of pollution as defined by the California Water Code, Section 13050.

C. Provisions

1. The Discharger shall comply with those applicable sections of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991, which are attached to and made part of this Order. To the extent that the Standard Provisions are inconsistent with any terms, conditions, or requirements in this Order, this Order shall govern.
2. Technical and monitoring reports specified in this Order are requested pursuant to Section 13267 of the Water Code. The Discharger shall comply with Monitoring and Reporting Program No. _____, which is attached to and made part of this Order. Failing to furnish the reports by the specified deadlines or falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the Discharger.
3. The Discharger may be required to submit additional technical reports as directed by the Executive Officer.
4. The Discharger shall notify Regional Board staff in writing of any proposed change in ownership or responsibility for construction or operation of the facility. This notification shall be given **90 days** prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents needed to demonstrate continued compliance with this Order. In the event of any change in ownership of the wastewater facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Board office.
5. The Discharger shall maintain a copy of this Order and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel upon request.

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6. The Discharger shall immediately notify Regional Board staff of any flooding, equipment failure, slope failure, or other change in site conditions, which could impair the integrity of waste containment facilities or precipitation and drainage control structures.
7. Regional Board staff will review this Order periodically and will revise these requirements when necessary.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

PAMELA C. CREEDON, Executive Officer